NR 445 Technical Advisory Group Meeting 1
February 23, 2000 Notes

Morning Session

1. **Welcome and Meeting Review**
   A. Mary Jo Kopecky, Deputy Administrator, Division of Air & Waste, welcomed TAG members on behalf of Secretary Meyer
      i. Reviewed NR 445 history – focus on prevention of problems
      ii. Need for revision; update of information
   B. Air Management Bureau Director, Lloyd Eagan, welcomed and thanked TAG members for participating. She outlined 3 goals, briefly described the charge & stated the focus.
      i. Goal 1: Update rule to level of current science to continue protecting public health
      ii. Goal 2: Simplify rule – make easier to comply
      iii. Goal 3: Develop process for updating rule regularly
      iv. Charge – WDNR is requesting input & advice from TAG members. Staff will use their advice & information in developing a proposed rule for the Natural Resources Board. The objective is similar to maintaining a house with a pre-existing strong foundation. It is not to build a new house. Therefore, certain issues that have already been established will not be "on the table" for discussion (such as which listing agencies are used for carcinogens). The focus is to protect public health due to ambient inhalation exposures rather than from ingestion.
      v. Introduction of Caroline Garber, Environmental Studies Section Chief
   C. A moment for questions
      i. *Q* - Keith Reopelle of WI Environmental Decade asked if NR 445 would address the mercury issue if the current mercury legislation doesn't pass?
      A – Lloyd Eagan answered that Sec. Meyer will address the issue when it arises; will probably be handled as a different rule
      ii. *Q* – T. Stocksdale of SC Johnson stated Hg already covered under NR 445
      A – L. Eagan said inhalation risk is the only thing covered. Bioaccumulation and ecological risk is not covered.
      iii. *Q* – Pat Stevens of WI Manufacturers and Commerce requested that other issues be brought to the table for discussion. He is not clear what can/cannot be discussed.
      A - L. Eagan said that there is no need to rehash an old fight; most important is to update chemicals not to change the rule entirely
      iv. *Q* – Susan Mudd of Citizens for a Better Environment asked if this would take out of consideration items more protective of public health. Is there a timetable to address bioaccumulation-related health issues? Shouldn't we address them now since we are here now?
      A – L. Eagan said that she will make a recommendation to Sec. Meyer i.e., bring up issues & take to Sec. Meyer. In addition, she stated that TAG members could make recommendations to address issues outside of NR 445 revisions.
      v. *Q* – S. Mudd asked if it is possible to develop a plan in concert with NR 445 rule?
      A – C. Garber replied this may be possible but that the priority is to get the rule revision passed now. Mercury will be addressed separately; PBT policy is currently being reviewed through an internal DNR multi-media group. L. Eagan said that these issues will be presented to Sec. Meyer but she cannot say what will result.

vi. *Q* – Wayne Koontz of the Wisconsin Chemical Industry Council asked if any assessment has been done of how much healthier the WI environment and public are due to NR 445. He suggested that this not be taken on faith.
A – C. Garber stated that no study has been done yet.
L. Eagan stated that an NR 445 compliance study had been completed and it was found that industry switched to less toxic chemicals; benefits are not only for public health. The benefits include decreased liability and worker exposure. Pollution prevention has been shown to be cost effective.
W. Koontz challenged her view and said that the shift was not necessarily toward less toxic chemicals but toward less regulated chemicals.

vii. *Q* – Patricia Kandziora of the UW – System Administration asked if IARC and NTP are good bases from which to start?
A – Yes.

viii. Q – Ed Wilusz, referring to a letter previously sent, asked that the relationship between NR 445 and Section 112 of the Clean Air Act Amendments (MACT) be addressed since Section 112 did not exist in 1988.
A -- Yes

2. Charge to TAG and Guidelines – Caroline Garber

A. Mission for TAG – to provide information and advice to the Bureau of Air Management for a protective and reasonable rule
B. Review of Schedule for Revising CH NR 445 and presentation of the seven points under Part IA of the charge.
C. DNR staff will develop draft rule proposal to take to the Natural Resources Board in 12/00 for a public hearing request, series of public hearings and comments to follow, revision, present to Board for adoption. Under this schedule, the effective rule revision date will be Fall 2001.
D. Review of Part II of the Charge – Member responsibilities focusing on commitment and regular participation

3. **Wisconsin's Hazardous Air Pollution Program -** Presentation by Jeff Myers, environmental toxicologist, and Andy Stewart, environmental engineer

A. J. Myers presented a brief history and an overview of NR 445
   i. Traced history back to the original Task Force
   ii. Noted two main categories of health effects and their appropriate NR 445 tables
      a. Carcinogens
      b. Non-carcinogens
      c. Also noted that individual chemicals may have multiple effects and properties
   iii. Major Chemical Groups
      a. Presume carcinogen if listed by IARC (International Agency for Research on Cancer) and NTP (National Toxic Program)
      b. Non-carcinogens used TLVs (threshold limit values) from ACGIH, an independent private organization of governmental industrial hygienists, TLVs are based on occupational exposures
   iv. How ambient air concentrations are calculated from TLVs
      a. J. Myers went through historical reason for 2.4% of TLV calculation.
   v. Reference Concentrations
      a. RfC developed by EPA available at the EPA IRIS web site.
   vi. Standards for Carcinogens
      a. Technology based = LAER (Lowest Achievable Emission Rate) for known carcinogens (Table 3A) and BACT (Best Available Control Technology) for

suspected carcinogens (Table 3B).

vii. Standards for Non-carcinogens
   a. AAC (ambient air concentrations) in $\mu g/m^3$ (micrograms per meter cubed)

viii. Description of different NR 445 tables
   a. Table 1 & 4 non-carcinogenic toxicity – TLV based toxicity
   b. Table 2 pesticides
   c. Table 3 carcinogens
   d. Table 5 those chemicals with RfCs

B. Questions Period
   i. Marty Kanarek of the UW Madison suggested that TLV covers the general population not sensitive individuals
   ii. T. Stocksdale said that the TAG should have the ability to take chemicals off of the lists based on TLV levels.

C. Andy Stewart explained connections between chapters NR 445, 438, 406, & 407
   i. Explanation of Primer – purpose to facilitate understanding context of the existing program and to understand revision proposals. Federal program is not addressed in primer.
   ii. Big Picture – Emission Inventory & Fees Requirements (NR410 & 438), Permit Requirements (NR 406 & 407) , and Emissions Standards & Control Requirements (NR 445) are all related but act independently; look at all 3 areas as a parallel process
   iii. Step 1: Determine which HAPs could possibly be emitted – check raw materials and outputs
   iv. Step 2: Estimate emissions in appropriate manner – Actual; Potential; Allowable
   v. Review of Permit Compliance – based on theoretical emissions
   vi. Review of Inventory Reporting Requirements – based on actual emissions
   vii. Review of Control Requirements – based on allowable emissions
   viii. Closer look at NR 445 – refer to 5 NR 445 tables
   ix. Review of Primer – Understanding Wisconsin's Hazardous Air Pollutant Rules & Requirements
      a. Explanation of how to use various tables

D. Questions Period
   i. *Q* - Rudy Salcedo, environmental scientist of the City of Milwaukee, asked if TAG members were to only give input on NR 445 or also regard impacts on other code sections.
   A – C. Garber – Yes. Consider standards and implementation of these standards (i.e., also inventory, permitting, compliance, etc., issues.
   iii. *Q* - P. Kandziora asked if mercury would then be included or not?
   A – C. Garber responded that only Hg inhalation exposure will be considered and not the PBT/bioaccumulative aspects of Hg.

Afternoon Session

4. Presentation/Clarification of Decision Criteria

A. Explanation of Criteria as "Filters" Caroline Garber
   i. Used filter diagram to explain how de minimis values will be derived
      a. First the universe of chemicals is passed through a "chemical" filter (e.g., those chemicals listed on IARC & NTP) Some strands of the filter are already set.
         - Carcinogens: listed as known or suspected by both IARC & NTP
         - Non-carcinogens: has a TLV in the most recent ACGIH publication
         - Other strands are a topic for this group

- Outcome – List of hazardous air pollutants that are regulated by the state of WI.

b. This creates the List of NR 445 chemicals
c. The NR 445 List and the Universe of Emission Sources is passed through an Applicability Filter (e.g. stationary vs. mobile source).
   - The strands are set and we are not planning to address these
d. The results from the Applicability Filter are passed through a Threshold Filter (i.e., de minimis filter).
e. The Threshold Filter yields two lists 1) the Compliance Demonstration Level (NR 445) and 2) Emission Inventory Reporting Level (NR 438)
   - Some strands are set and we are not planning to revisit (e.g., the formula for calculating ambient air concentrations for non-carcinogens)
   - Other strands are a topic for this group

B. Presentation of criteria for listing NR 445 – J. Myers
   i. Explanation of table "Decision Rules for Listing Chemicals" which compares major elements of the 1985 Task Force, Existing NR 445, DNR staff May 1999 proposal, and current staff proposal.
      a. Synopsis – The major difference between existing NR 445 rule and the Feb. 2000 staff proposal is that vapors with TLVs exceeding 99 ppm are not excluded from the listing under the Feb 2000 proposal. The major differences between the May 1999 proposal and the Feb. 2000 proposals are: The Feb 2000 proposal does not list Clean Air Act Chemicals and Great Lakes chemicals that do not have a TLV or reference concentration and the Feb. 2000 provides exceptions from listing for simple asphyxiants and particulates with TLVs equal to or greater than 10 mg/meter cubed.
      b. T. Stocksdale commented on the "no exception" for vapors – gave reason why 1985 Task Force included the vapor exception ≥ 99 ppm; A. Stewart replied that not all vapors are controlled by VOC rules; T. Stocksdale suggested not putting in a vapor TLV; C. Garber said is an issue to discuss at next meeting = parking lot issue
      c. Suresh Relwani of RK & Associates asked how many of the Great Lakes chemicals do not have a TLV? Answer: Approximately 10 or 15. Then he asked if this is part of the SIP. Answer: No.
      d. Liz Wessel, an environmental policy consultant, asked which Great Lakes chemicals have no TLVs? A table was passed around with those chemicals named.
      e. Richard Osa of STS Consultants asked that the WDNR consider not including federal HAP chemicals in NR 445 and removing federal HAPs that were already delisted from the federal list.

C. Presentation of Decision Rules for Setting NR 445 de minimis Values – J. Myers
   a. Synopsis - The only difference between the existing NR 445 decision rules and the February 2000 proposals is the method for calculating the de minimis values for Table 3 chemicals (carcinogens).
   b. J. Myers made clear that de minimis values ≠ standard values. If exceed de minimis, must determine compliance with AACs or adopt technology controls for Table 3 chemicals.
   c. Eric Uram of the Sierra Club asked why the EPA thought that Great Lakes and CAA chemicals should be listed in the first place and the WDNR did not? J. Myers responded that that the WDNR uses the TLV as a basis for setting values, which isn't the same method as the EPA. E. Uram asked why the WDNR doesn't list them if the EPA does? T. Stocksdale said that the Great Lakes chemicals are bioaccumulative and don't belong. S. Mudd suggested that the chemicals should be listed under some Air Management program.

D. Issue Paper on de minimis for Carcinogens

a. Synopsis – The February 2000 WDNR proposal for setting de minimis levels for carcinogens outlines three alternative approaches for discussion by the TAG. J. Myers and C. Garber explained why WDNR is looking at setting the de minimis level for carcinogens in a different way than is done in existing NR 445. The *potency* of the chemical is of more concern from a public heath perspective than whether the chemical is a known or suspected carcinogen.
b. The various alternatives for setting de minimis values were presented: Alternative 1a = 10^{-6} (risk level of 1 additional cancer per 1 million people), Alternative 1b = 10^{-5} (risk level of 1 additional cancer per 100,000 people) and Alternative 2 = the "binning approach" listing chemicals in 4 categories (extremely high, high, medium and lower risk groups) based on unit risk factors. Alternative 2 is the WDNR staff preferred alternative.
c. T. Stocksdale suggested not setting the dioxins de minimis as zero. Then all businesses and homes would have to report.
d. T. Stocksdale asked what the relationship of 100 lb./yr. to the unit risk factor is? How does any level relate? He asked J. Myers to do some comparative calculations.
e. J. Myers explained that a cluster analysis using the natural breaks method was used to separate groups into ranges of potencies. This is different from a pure risk-based approach that would have a de minimis value set for each chemical.
f. J. Myers gave examples on de minimis proposal threshold lists.
g. It was expressed that de minimis values are becoming so low that even when a chemical is at the limit of detection, the chemical may still be present at an emission rate above the de minimis.

E. Presentation of Criteria for Setting de minimis Levels for NR 438 – Andy Stewart
a. Synopsis – There are three primary differences between the existing NR 438 and February 2000 WDNR proposal for decision rules to set emissions inventory de minimis reporting levels. The first proposal would create an exception requiring reporting of any facility emitting 10 lbs/yr or more of mercury (all species) and any amount of dioxin or PCBs. The second proposal is to not have a combined threshold for groups of chemicals. Some groups had combined reporting thresholds previously. Finally, the third proposal would require reporting for the following Great Lakes Chemicals without TLVs for emissions levels exceeding 10 lbs/yr: Di-n-octyl phthalate, Octachlorostyrene, Pentachlorobenzene, Perylene, Tetrachlorobenzene, 1,2,3,4-, Tetrachlorobenzene, 1,2,4,5-, and Tributyl tin .
b. T. Stocksdale suggested that the cost of the Toxics Release Inventory (TRI) to SC Johnson is "huge" and that making detailed calculations for small numbers is too expensive.
c. A. Reiter of Consolidated Papers Inc., suggested that if the 445 threshold is not exceeded then should not report since cost is great.
d. E. Uram stated that this ignores cumulative exposures of the community. For example, 10 facilities all emitting just below the de minimis in the same community produces a greater effect than a few companies above the de minimis value. He wants to see reporting.
e. D. Gardner of Briggs & Stratton asked, "What the purpose was of NR 438 reporting."
f. R. Salcedo reiterated what E. Uram said under point 4, B, iv, c.

F. Presentation of Draft Working List: Feb 2000 NR 445 Chemicals List, De Minimis Values and Standards
a. Ed Wilusz asked if the current draft list reflects the modeling and AAC changes? J. Myers said that both de minimis and the standard may have changed. In some cases the standard has changed because of incorrect calculations and rounding errors.

b. T. Stocksdale asked about row 1 of the draft table and why the ratio is 1. J. Myers said that while the standard has not changed significantly, the threshold for compliance has.
c. T. Stocksdale urged that if the WDNR regulates chemicals as Table 3A or 3B carcinogens that the TLV be forgotten.
d. Howard Hofmeister of Bemis Co. asked if we have anything in Excel spreadsheets showing the TLVs? Answer: No. Must go back and use the TLV book.
e. H. Hofmeister asked about other assumptions or base parameters that are used in the models. C. Garber responded that the information will be compiled and provided to TAG members.
f. C. Garber stated that the next meeting will be on March 22 in Milwaukee and as soon as we have a location, notice will be given. The agenda will be discussing decision criteria.
g. Meeting was adjourned shortly after 3:30 p.m.

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